Introduction

Cancer is a silent epidemic that has not yet attracted major attention at a high-level political and economic forum such as the G8 Summit. However, this scenario is changing rapidly. Owing to the recent WHO Framework Convention on Tobacco Control (WHO FCTC) and the recent WHO resolutions on diet, physical activity and health, there is an increasing political debate about how to address prevention of cancer and other non-communicable diseases that share similar risk factors. Furthermore, a recently approved WHO resolution on cancer prevention and control [1] highlights the need for a comprehensive approach to combat cancer, with prevention being an integral component.

The cancer epidemic in developed countries, and increasingly in developing countries, is due to the combined effect of the ageing of the populations and the high or increasing level of prevalence of cancer risk factors. It has been estimated that 43% of cancer deaths worldwide are due to tobacco, unhealthy diet, physical inactivity and infection [2]. Furthermore, environmental and occupational factors, although of less relative importance, can play a significant role in communities where protective measures are scarce. Thus, from a global perspective there is a strong justification for cancer prevention activities with a major, but not exclusive, focus on the behavioural determinants of cancer. That means reversing behaviour patterns linked to tobacco use, unhealthy diet and physical inactivity. In the past, monosectoral strategies targeting individual behaviour by providing information and public counselling seem not to have been effective. The ‘catastrophic failure’ of public health policy with regard to the prevention of non-communicable disease including cancer has caused major concern [3].

To overcome these shortcomings, cancer prevention policies have to go far beyond the health sector and have to be located in the broad context of the social and economic environment [4]. On that basis, WHO has developed different normative strategies for addressing the major determinants of chronic diseases, including cancer. With regard to tobacco control WHO has, for the first time in its history, chosen the strategy of a legally binding international treaty among its Member States: the WHO FCTC [5]. Article 19 of the constitution of WHO [6] explicitly provides the legal basis for this strong public health measure.

Another approach adopted by WHO was the elaboration of a non-binding set of recommendations for the promotion of healthy diet and physical activity in the form of a Global Strategy on Diet and Physical Activity (Global Strategy) [7], which was adopted by Member States at the 57th World Health Assembly (WHA) in May 2004. In contrast to the WHO FCTC, this non-binding approach does not involve any legal obligation for countries to implement its recommendations. However, it does provide an important template for countries to develop national plans of action and approaches for dealing with this important public health problem. In formulating these two different approaches to addressing major determinants of chronic disease, certain interest groups and governments have initiated an intensive debate in the context of the respective WHAs in 2003 (tobacco) and 2004 (diet and physical activity) where these two issues were considered.

In this article we will propose that effective cancer prevention goes far beyond the health sector, and that planning and implementation of cancer prevention strategies are increasingly expected to become part of a politically charged debate. As examples of this debate, the discussions in the context of the WHO strategies for tobacco control and on diet and physical activity are analysed, giving an insight into conflicting interests in the political arena where cancer prevention is being dealt with. This debate is ongoing at international, national and regional levels.

However, cancer prevention is not limited to efforts to change human behaviour. In many parts of the world people are exposed to carcinogens, in particular in the workplace, and have no options for healthier choices. Many carcinogens such as asbestos were identified decades ago, but implementation of regulations to control these agents has been delayed; this is also mostly a consequence of political debates [8].

The cancer epidemic and its potential for prevention

Cancer is one of the major threats to public health in the developed world, and increasingly in the developing world. In developed countries cancer is the second most common cause of death. According to the World Health Report 2004 [9], cancer accounted for 7.1 million deaths in 2003, exceeding the number of deaths caused by tuberculosis, HIV/AIDS and malaria taken together (5.6 million). It is estimated that the overall number of new cases will rise by 50% in the next 20 years [2], leading to a total of 15.3 million new patients with cancer per year. The proportion of new patients living in
the developing world will then amount to over 60% of the overall burden.

There is a large body of evidence [10] suggesting that cancer is potentially the most preventable of the major life-threatening diseases facing humankind (John Seffrin) [2]. With regard to tobacco, it is estimated that 22% of the overall burden of cancer in Europe is due to tobacco consumption [2] and that worldwide up to 80% of lung cancer in men and up to 45% in women [10] is due to tobacco use. In addition to lung cancer, tobacco smoking causes a large variety of cancer types such as cancer of oral cavity, naso-, oro- and hypopharynx, nasal cavity and paranasal sinuses, larynx, oesophagus, stomach, pancreas, liver, kidney (body and pelvis), ureter, urinary bladder, uterine cervix and bone marrow (myeloid leukaemia) [11]. Exposure to environmental tobacco smoke increases lung cancer risk.

Dietary factors are estimated to account for approximately 30% of cancer in industrialized countries and 20% in developing countries [12]. Overweight and obesity are associated with increased risk for oesophagus, colorectum, postmenopausal breast, endometrium, kidney and oesophagus cancers (Table 1).

Physical inactivity and elevated body weight are estimated to account for one-fifth to one-third of several of the most common cancers, especially cancers of the breast (postmenopausal), colon, endometrium, kidney and oesophagus [13].

However, there is still a lack of data about diet and cancer in the developing world. Further research is also needed to determine in more detail the complex relationship between some dietary factors and cancer, and in particular on the protective factors of diet components such as fruits and vegetables [14].

**Table 1.** Diet, physical activity and cancer risk: levels of evidence

<table>
<thead>
<tr>
<th>Level of evidence</th>
<th>Nutritional factors and related cancer risk</th>
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<tr>
<td></td>
<td>Decreased cancer risk associated with:</td>
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<tr>
<td></td>
<td>Increased cancer risk associated with:</td>
</tr>
<tr>
<td>Convincing</td>
<td>Physical activity (1)</td>
</tr>
<tr>
<td></td>
<td>Overweight and obesity (2)</td>
</tr>
<tr>
<td></td>
<td>High alcohol intake (3)</td>
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<td></td>
<td>Aflatoxins (4)</td>
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<td></td>
<td>Chinese-style salted fish (5)</td>
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<tr>
<td>Probable</td>
<td>Fruit and vegetable (6)</td>
</tr>
<tr>
<td></td>
<td>Preserved meat (1)</td>
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<tr>
<td></td>
<td>Salt-preserved foods and salt (7)</td>
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<td></td>
<td>Very hot (thermally) drinks and food (8)</td>
</tr>
</tbody>
</table>

(1) Colorectal cancer; (2) cancer of oesophagus, colorectum, breast (postmenopausal), endometrium, kidney; (3) cancer of: oral cavity, pharynx, larynx, oesophagus, liver, breast; (4) liver cancer; (5) nasopharyngeal cancer; (6) cancer of oral cavity, oesophagus, stomach, colorectum; (7) stomach cancer; (8) cancer of: oral cavity, pharynx, oesophagus; (9) breast cancer.

Other risk factors amenable to prevention are carcinogens and infections. It is estimated that in developed countries up to 4% of the cancer burden can be attributed to workplace exposure to carcinogens [15]. In developing countries this proportion might be higher. Infectious agents such as hepatitis B virus (HBV), schistosomiasis and human papilloma virus (HPV) are estimated to be causal for 25% of all cancers in developing countries [16].

In addition to being risk factors for cancer, tobacco, unhealthy diet and sedentary lifestyles are also contributing to the increase in a large variety of other non-communicable diseases, such as cardiovascular diseases, type 2 diabetes and chronic obstructive pulmonary disease (COPD).

**Epidemic of cancer determinants in context**

The prevalence of the major determinants of cancer is high in affluent countries and is rising rapidly in the developing world. At least one-third of the global adult population (1.3 billion people) use tobacco. There is some evidence that smoking trends in developing countries are increasing [17]. Although tobacco use is decreasing among men in many developed countries, this is not the case for women, amongst whom smoking is on the rise. The prevalence of obesity is also increasing rapidly worldwide [18]. Childhood obesity prevalence in the USA has more than doubled since 1960 [19].

The increased prevalence of cancer risk factors is closely linked to economic development. Urbanisation is key to understanding lifestyle changes [20]. In most parts of the world, rapid growth of urban centres results in deficiencies in housing, infrastructure and basic services. This trend is accompanied by influences of global trade [21], industrialisation and expansion of food markets, in particular to the developing world. Populations are exposed to increased availability and aggressive promotion of processed cheap food and beverages, which are generally high in fats, sugars, refined carbohydrates and salt, but reduced access to and affordability of fruit and vegetables. Physical activity levels are also declining worldwide. Increased mechanisation, automation and changes in transportation all play significant roles in physical activity patterns [22].

However, not all strata of the society are affected by these influences in the same way, with the consequence of increasing health inequalities. With rising income in China, the proportion of energy intake from animal saturated fats is increasing to a greater extent among the poor than among the rich population [23].

However, significant changes are also found in all income groups. An increase of 82% of caloric sweetener owing to higher income levels and urbanisation has been recorded between 1962 and 2000. In addition, lifestyles have become increasingly sedentary, with a rapid shift from energy expenditure-intensive to automated occupations, changes in transportation and the increased use of motorised vehicles [24, 25]. All these factors lead to a decrease in energy expenditure.

Globalisation of markets has also facilitated the increase of tobacco consumption beyond traditional markets and into
the developing world [21]. As a result, tobacco consumption in many Asian countries, and even in Africa, is increasing.

What works in cancer prevention

A wide range of public policy interventions at community, population and macroeconomic level involving tobacco, diet, alcohol and physical activity are suitable for cancer prevention.

With regard to tobacco control, evidence-based and well-tested interventions exist for key strategies to reduce tobacco consumption. Regulation of tobacco products to target demand, including using price and non-price measures, is the intervention most likely to reduce tobacco use. Increasing the price of tobacco and tobacco products, primarily through taxes, is known to be the single most effective measure for reducing short-term consumption. While there may be some differences between countries, in general every 10% increase in cigarette taxes results in a reduction in consumption of ~4% in high-income countries and ~8% in low- and middle-income countries [17]. Non-price measures to reduce the demand for tobacco include comprehensive advertising bans. Based on research from 102 countries, advertising bans reduce cigarette consumption by 6% [17]. Other non-price interventions include legislation to prohibit smoking in public places and workplaces, information and advocacy campaigns, cessation programmes to assist those who want to quit smoking and the use of prominent and strongly worded health warnings on cigarette packets. For example, in Canada half of the smokers intending to quit or reduce their consumption were motivated to do so by graphic warning labels on cigarette packets [43].

Evidence also exists for effective policy interventions to change behaviour related to diet and physical activity. Prevention and health promotion programmes in several countries such as Finland [26–28], Norway [29], Japan [30] and Mauritius [31, 32] have shown that when policies are introduced to address both individual and population levels, these can yield public health outcomes in terms of behavioural changes.

There is a broad scientific consensus that effective prevention and control strategies combine individual and population approaches [33]. These policies need to cover three sets of determinants: biological, behavioural and psychological aspects of individuals; changes in the food and drink consumed; an environment that encourages unhealthy diet and sedentary lifestyle or hinders behavioural change. Experiences from prevention programmes targeting non-communicable diseases, as well as from other diseases, show that effective interventions yield results in all three levels covered by the strategies and programmes.

WHO policies for cancer prevention

Public policy targeting behavioural changes is a key component of the overall WHO strategy for the prevention of non-communicable diseases. Extending far beyond the health sector, cancer prevention actively involves a broad spectrum of occupational, social and political sectors. The major aim is to create environments where healthy choices are the easier ones, and to increase individual skills in making healthier lifestyle choices.

In response to several WHO resolutions that recognised the need for effective non-communicable disease prevention programmes [34, 35], WHO has developed a policy package for the prevention of non-communicable diseases by tackling the tobacco and unhealthy diet epidemic.

The WHO FCTC, which is an international treaty, was adopted by WHA 2003 after six rounds of intergovernmental negotiations, which were preceded by several tobacco-related WHA resolutions adopted in the last 30 years. The WHO FCTC will enter into force and become law for the countries that are parties to it 90 days after the receipt of the 40th ratification or equivalent instrument. This process is still ongoing but at an advanced stage.

With regard to diet and physical activity, WHO developed the Global Strategy on Diet, Physical activity and Health (Global Strategy). The Global Strategy adopted by WHA 2004 provoked extensive debate. In addition, the WHO Executive Board cancer prevention and control resolution [1] reflects the strong commitment of all Member States to developing and reinforcing comprehensive cancer control programmes under the leadership of WHO, where prevention is considered a key element.

The WHO Framework Convention on Tobacco Control (WHO FCTC)

The WHO FCTC (Table 2) provides a comprehensive mix of evidence-based interventions for tobacco control aimed at reducing the demand for and supply of tobacco products and at protecting populations from exposure to tobacco smoke. The Convention is the result of WHO’s efforts to address

| Table 2. The WHO Framework Convention on Tobacco Control |
|---|---|
| **General principles** | **Examples** |
| **1** Prevention of people from taking up tobacco use | Price and tax increases |
| | Advertising ban |
| | Interdiction of sales to and by minors |
| **2** Promotion of smoking cessation | Cessation programmes, counselling services |
| | Health warnings and messages |
| **3** Protection of non-smokers from exposure to tobacco smoke | Non-smoking areas in indoor work places, public transport and other public areas |
| **4** Regulation/information about tobacco products | Information about content of and emissions from tobacco products |
| | Regulation of product packaging and labelling including restriction of misleading terms (‘low tar’, ‘light’) |

Source: WHO [5].
tobacco as a public health issue. The ultimate formulation of a framework convention on tobacco control as a legally binding international treaty passed through an intense process of six intergovernmental negotiating sessions over a period of nearly 3 years.

The political arena of the WHO FCTC process

The following policy analysis is based on documents related to the political debate around the WHO FCTC and on reviews of tobacco industry internal documents that had to be made public as a result of the State of Minnesota and the Blue Cross and Blue Shield of Minnesota lawsuit against the tobacco industry in the late 1990s. The analysis of these disclosed documents showed that the tobacco industry had known since at least the 1950s that smoking causes cancer, and followed a systematic strategy of denial and cover-up of the link between tobacco and cancer [36].

Moreover, these documents reveal that for decades, the industry knew that nicotine is an addictive drug, that nicotine addiction can be perpetuated and even enhanced through cigarette design and that ‘health conscious’ smokers can be captured by misleadingly labelling tobacco products as ‘low-tar, low-nicotine products’ [37].

Without a doubt, the tobacco industry is the greatest hindrance to the creation of an effective public health policy to curb tobacco consumption. The industry has worked hard to prevent the development of a global strategy to combat tobacco consumption. An internal British American Tobacco document described the WHO FCTC as ‘an unprecedented challenge to the tobacco industry’s freedom to continue doing business’ [38].

Responding to the challenges of global tobacco control in general and the WHO FCTC in particular, the industry has attempted to undermine the science showing the danger of tobacco use, employed tobacco growers’ organisations to make economic arguments against tobacco control, challenged the WHO’s role in coordinating the global strategy against tobacco and worked to delay the process of tobacco control.

The first and earliest of the tobacco industry’s strategies against global tobacco control was to undermine the science showing the grave dangers of tobacco use as well as the dangers of exposure to second-hand smoke. A 1972 Tobacco Institute memorandum describes a ‘holding strategy, consisting of: creating doubt about the health charge without actually denying it’ [39]. Recently, members of the tobacco industry have disputed the addictive nature of nicotine, while investing heavily in studying methods of manipulating the nicotine level in tobacco products in order to maintain and increase addiction. Tobacco industry practice shows a long history of obscuring the deadly nature of their products.

The second strategy that the industry employed was the use of front groups, such as tobacco growers’ organisations, to make economic arguments against tobacco control and the WHO FCTC. The economic issues surrounding tobacco control engendered fierce political debate during the WHO FCTC negotiations. For example, the International Tobacco Growers Association (ITGA) has argued that poor farmers in Africa will suffer if WHO’s tobacco control activities are successful [40]. ITGA, an organisation that is allied with the industry, is simply incorrect about the effects on tobacco farmers. First, assuming that smoking prevalence remains at present levels, there will be more than 1.7 billion smokers in 2025. Even if the prevalence of smoking is reduced at an annual rate of 1%, firm evidence indicates that the market for tobacco will remain close to its present size of 1.3 billion smokers in 2025 [42]. Secondly, ITGA and the tobacco industry play up the economic benefits of tobacco but neglects the benefits of crop substitution programmes to farmers. Thirdly, ITGA and the tobacco industry plays down the threat of tobacco-related diseases in developing countries, such as the risk of green tobacco sickness to tobacco farmers. Green tobacco sickness occurs when nicotine is absorbed through the skin while harvesting tobacco, causing symptoms such as headaches, nausea, breathing difficulties, diarrhoea and fluctuations in blood pressure or heart rate. Fourthly, arguing that farmers in developing countries will disproportionately suffer from successful tobacco control measures is patently false. According to projections made by the Food and Agriculture Organisation of the United Nations (FAO), global production will increase in developing countries while decreasing in developed countries [42]. Fifthly, ITGA and the tobacco industry also neglect to take into account the tobacco costs that other governmental and non-governmental sectors bear, such as health-care costs and lost productivity due to the consumption of manufactured tobacco products. In the final analysis, the WHO FCTC will probably benefit, not harm, poor tobacco farmers. However, despite the net benefits of tobacco control to poor farmers, ITGA and the tobacco industry continue to refute the work of WHO in the field of tobacco control.

The efforts of ITGA are but one example of one area where industry front groups are used to combat the efforts of global tobacco control and the WHO FCTC. The industry also uses groups associated with advertising and hospitality interests, claiming that both advertising bans and restrictions on public smoking will lead to economic ruin. The industry is as wrong in these cases, just as they are wrong in their economic claims against tobacco control on the tobacco-growing front.

The third strategy employed by the tobacco industry was to challenge WHO’s role in coordinating the global strategy against tobacco. As documented in a WHO report, the industry attempted to divide wealthy and developing nations on the issue of tobacco control [41]. For example, the industry paid academics to write supposedly independent articles that argue that the WHO should focus on funding work to fight ‘diseases in third world nations, leaving rich, first world nations to finance their own [tobacco control] programs’ [39]. These arguments ignore the grave harm caused by tobacco in the developing world and the predatory nature of the industry as it attempts to increase sales in developing markets.

The fourth tobacco industry strategy was to delay the process of tobacco control and the WHO FCTC. Delaying programmes that restrict tobacco industry practice allows
tobacco companies more time to develop markets and realise profits. An example of the industry’s efforts to delay tobacco control is provided by the high-profile social responsibility campaigns undertaken by several tobacco companies in the past few years since the negotiation of the WHO FCTC and its subsequent unanimous adoption by the 56th WHA. These efforts attempt to pre-empt statutory regulation by offering ineffectual voluntary codes in several areas in the domain of tobacco control, such as marketing restrictions and youth smoking prevention programmes. This strategy, like others, attempts to delay or prevent the work of WHO on tobacco control and endangers the lives of millions of tobacco users.

In order to address the challenge posed by the tobacco industry to global tobacco control, States Parties to the WHO FCTC are required to protect their national tobacco control policies from the vested interests of the industry. In this regard, the WHO FCTC is the only treaty that specifically warns of potential subversion by an industry. Finally, the WHO FCTC will serve as an effective instrument to combat the ‘global bads’ associated with the globalisation of tobacco products.

**The WHO Global Strategy on Diet, Physical Activity and Health**

The backbone of the Global Strategy (Table 3) is the broad scientific consensus that effective prevention and control strategies combine approaches aimed at both individuals and populations [33]. The results of a WHO–FAO expert consultation on diet, nutrition and the prevention of non-communicable diseases was of major relevance for the development of the Global Strategy [12].

Acknowledging the complexity and multisectoral nature of these approaches, WHO has developed the Global Strategy in close consultation with Member States, in particular, officials from the public health sector, but also with other United Nations agencies, civil society groups and the private sector. The Global Strategy provides a toolbox of policy options for changing dietary and physical activity behaviours, covering three sets of determinants: the environment that encourages unhealthy lifestyle, the biological, behavioural and psychological aspects of individuals, and the agents for unhealthy lifestyle such as food, drink or modes of transport. Therefore, these policies are aimed at changing food and drink consumed, changing the environment that encourages unhealthy diet and sedentary lifestyle, or hinders behavioural change, and improving individual capacity for healthier behaviour choices.

**The political arena of the Global Strategy on Diet, Physical Activity and Health**

By involving stakeholders outside the health domain, from sectors such as finance, trade, agriculture and transport, and by recommending broad-based interventions, the Global Strategy becomes political, and sometimes controversial, as the recommendations may be perceived to have a potential impact on the livelihoods or businesses of certain groups.

The development of the Global Strategy generated much debate and raised objections on the basis of some political concerns of Member States, non-governmental organisations and the private sector. This debate is reflected in the large body of detailed comments addressed by Member States during February 2004, which are published on the WHO website [44]. These comments are focused on the following five major areas of debate.

First, some comments challenged WHO’s role with regard to health priorities in developing countries. It was argued that WHO should focus more on under- than overnutrition, which appeared to be a problem of the affluent countries and therefore less a priority for international public health. This argument was raised mainly by sugar-growing countries, despite

| Table 3. WHO Global Strategy on Diet and Physical Activity: key policy recommendations

<table>
<thead>
<tr>
<th>Policies concerning the environment</th>
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<tbody>
<tr>
<td>1 Formulation of multisectoral and multi-stakeholder policies and strategies</td>
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<tr>
<td>2 Formulation of national dietary and physical activity guidelines</td>
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<tr>
<td>3 Promotion of food products consistent with a healthy diet, including the provision of market incentives to promote the development, production and marketing of food products that contribute to a healthy diet</td>
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<tr>
<td>4 Introduction of fiscal policies to influence food choices</td>
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<tr>
<td>5 Consideration of agriculture policies and their effect on national diets</td>
</tr>
<tr>
<td>6 Introduction of transport and environmental policies that promote physical activity</td>
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<tr>
<td>7 School policies that improve health literacy promote healthy diet and provide physical education and facilities</td>
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<tr>
<td>8 Address current marketing practices, especially to children, in particular with regard to the promotion of foods high in fat, salt and sugar</td>
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<tr>
<td>9 Utilisation of international tools such as the Codex Alimentarius to strengthen public health efforts</td>
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</tbody>
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<th>Policies aimed at individual change</th>
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<tbody>
<tr>
<td>1 Provision of accurate information through education and public awareness campaigns and adult literacy programmes</td>
</tr>
<tr>
<td>2 Provide accurate nutrition labelling and monitor nutrition and health claims on foods</td>
</tr>
<tr>
<td>3 Practical advice by health professionals to patients and families on benefits of healthy diets and increased levels of physical activity, combined with support to help patients initiate and maintain healthy behaviours</td>
</tr>
<tr>
<td>4 Provision of clear simplified messages with regard to healthy diet and physical activity (reduce salt, sugar, fat, increase fruit and vegetables, etc.)</td>
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<table>
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<tr>
<th>Policies that address the foods, drinks and modes of transport</th>
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<tr>
<td>1 Modify foods to limit fat, especially saturated fat and trans fatty acids, salt and sugar</td>
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<tr>
<td>2 Introduction and provision of incentives for new products with better nutritional value</td>
</tr>
<tr>
<td>3 Modify marketing practices of foods that contribute to unhealthy diet</td>
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<tr>
<td>4 Encourage environmental planning that allows increased walking, cycling and other physical activities</td>
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</tbody>
</table>

Source: WHO [7].
the fact that many of these countries now face a greater burden due to non-communicable diseases and relatively few problems with undernutrition and its related diseases.

Secondly, several countries wanted to see the Global Strategy paying more attention to the roles of individuals in determining their lifestyle, and criticised the approach of seeking environmental changes as a key role for governments to influence dietary and physical activity patterns.

Thirdly, some countries also challenged the legitimacy of the Global Strategy, recommending that governments consider fiscal policies such as taxes and subsidies to bring about environmental changes.

Fourthly, the scientific basis of some dietary recommendations, as stated in the WHO–FAO expert consultation report [12], was targeted. The sugar industry and other private sector or industry interest groups played a major role in this debate. One of the main critiques surrounded the recommendations for limiting daily intake of sugar to less than 10% [45]. In focusing their critique on the recommendations with regard to sugar intake, some interest groups tried to undermine the scientific approach of the WHO–FAO consultation and to use this as a strategy for stalling, or at least slowing down, the development of the Global Strategy.

Finally, there were concerns with regard to the potential implications of the Global Strategy for international trade agreements.

Many of these concerns were easily addressed by introducing some modifications into the final version of the Global Strategy, which was eventually endorsed unchanged by WHA 2004. However, some concerns, which were of a political nature as they related to implications of the strategy to sectors outside health, came to the fore during the WHA debate. These concerns were eventually resolved by having the Global Strategy’s accompanying resolution amended to reflect these points. An illustrative example is the addition of preamble and operative paragraphs stating that the Global Strategy should not be construed as a justification for the adoption of trade-distorting or trade-restrictive measures [7].

Conclusions and discussion

Although there is sufficient knowledge about the causes of cancer and about strategies to prevent cancer, little has been translated into public health practice.

There are several reasons for this translation gap. First, in many parts of the world cancer has not yet been recognised as a public health priority. Secondly, effective cancer prevention faces major obstacles because it has to target the social and economic dimensions that are responsible for the cancer burden. Therefore, cancer prevention is a very complex endeavour that has to involve stakeholders from many sectors of the society. However, the public and professional pressure on policy-makers to act decisively in order to curb the growing cancer epidemic mounts daily.

In an ideal situation, the primacy of health would be recognised by all stakeholders and health policy would apply effective cancer control strategies. However, ‘the praxis of health policy reflects often the interplay of economic and political interests which are not necessarily in line with the theoretical primate of social welfare and health’ [46].

Some of the discussions around the WHO FCTC and the Global Strategy appear to some extent similar. Attempts to challenge the scientific basis, WHO’s role in international public health and concerns with regard to economic consequences can be observed in both of these debates. However, there are fundamental differences because of the nature of the situation of risk that is targeted: tobacco is without any doubt a carcinogen and addictive factor *per se*, whereas diet only indirectly affects the cancer risk by particular patterns of processing and consumption.

With regard to tobacco control, two perspectives are diametrically opposed. The public health position aimed at protecting or improving the health of the population conflicts with private entities, the tobacco growing and processing private sector whose pursuit of economic prosperity within a free market is a by-product of a free-market economy. However, according to basic economic principles, the expanding tobacco market during this era of globalisation can be considered a market failure because of the ‘divergence between private and social costs and benefits’ [46]. In this situation, involvement of the public sector is needed, which leads to a primacy of public health interventions.

With regard to diet and physical activity, the picture is to some extent different. The debates about trade, individual responsibility and fiscal policies reflect the interrelation between health, trade, political ideology and different approaches to prevention as it is variously manifested in existing national political systems. Hindrances to implementing the Global Strategy effectively will appear with the shift of this same debate to national level as countries move forward to develop national work plans and strategies.

The broadening of policies for the prevention of cancer beyond health education and information, which was spearheaded by WHO to change environments and socio-economic determinants, is bound to provoke such debate. These can only be resolved by close involvement of the different sectors and through well-coordinated international cooperation for policy implementation. The Global Strategy acknowledges the important role that the food industry has to play, and encourages cooperation between food producers and manufacturers and governments to implement the strategy. At the same time, certain sectors in the food industry are expected to continue to interfere with public health progresses. As with other political hindrances, these will have to be mediated through ongoing dialogue and debate at both the international and national levels.

What will in fact be achieved in cancer prevention will depend on national or regional debates between interest groups, and their ability to influence the political process and to develop new prevention policies and programmes.
Non-governmental organisations such as patient groups, consumer protection groups or professional medical organisations, such as national and international oncological organisations and societies, must play a major role in this struggle to overcome the hindrances. Public health approaches to change behaviour patterns linked to cancer will be effective only when cancer prevention is fully incorporated by all related sectors of society.

The political debate about prevention is one important dimension within a broader debate about priorities in societies, where the key question, ‘what amount of resources a society wants to invest in health and who should pay?’ [47], has to be addressed. International public health agencies and government ministries will have a unique role in ensuring that effective prevention of cancer reigns.

Acknowledgements

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